DESIGNING METHODS AND CIRCUITS FOR IMPEDANCE MATCHING

ABSTRACT OF THE DISCLOSURE

The designing methods for an impedance matching are provided which include steps of: connecting in parallel a capacitor to a collector/drain of a bipolar/field effect transistor having a common-emitter configuration, and obtaining a desired resistance at a base/gate of the bipolar/field effect transistor due to a feedback effect for achieving the impedance matching. The circuits for an impedance matching are also provided which include: a first bipolar/field effect transistor, an inductor, a first resistor, a power supply, a capacitor, a second bipolar/field effect transistor, a second resistor, and a third resistor, wherein a desired resistance is produced in the input impedance looking into the base/gate of the first bipolar/field effect transistor through an equivalent parallel combination of an capacitor and an resistor produced at the base/gate of the second bipolar/field effect transistor so as to achieve the impedance matching.